

REMARKS

Applicant appreciates the withdrawal of all previous rejections made based on the Spittle reference, and responds to request reconsideration of the rejections of all pending claims made in the final Office Action mailed March 31, 2009.

Turning first to the objections to the specification and the corresponding rejections under Section 112, first paragraph, Applicant submits that there is indeed express written support in the specification for the inventions of claims 1, 3-7, 9-25, and 37-43. Specifically, none of these claims expressly requires "irregularly shaped metal or carbon fibers," as the Examiner contends. Rather, these claims simply require that a portion of the structural fibers are "irregular," which according to the specification comprise the "glass or polymer fibers" of the Markush group. As the Examiner recognizes, express support for this concept is found in the present specification. That additional fibers may be included, such as the metal or carbon fibers, does not mean support for the claimed invention is lacking, since the concept of the invention is clearly described in sufficient detail to comply with Section 112, first paragraph.

Nonetheless, as suggested by the Examiner, Applicant presents formal amendments to claims 1 and 39 to clarify the nature of the invention. Specifically, the amendments specify that the irregular fibers claimed are not necessarily the structural fibers (which as the specification teaches may be metal or carbon), a portion of which structural fibers may be "replaced" by the claimed irregular fibers. As these amendments simply clarify and place the claims in better form for purposes of appeal,

entry is believed to be proper under 37 C.F.R. Section 1.116 and is respectfully requested.

Claims 1, 39, and 47 also stand rejected under Section 112, first paragraph, on the ground that the limitation that the layer of material having a “visible outer surface” is not supported by the specification. A corresponding objection to the specification is also made.

Applicant respectfully submits that a veil material with a visible outer surface and including the claimed fibers is clearly shown in each of the drawing figures (see, e.g., Figures 1, 3, and 4, and note fibers 22, 24, 25, and 27 visible on the outer surface). These figures undoubtedly form part of the written description of the specification. *See Vas-Cath, Inc. v Mahurkar*, 935 F.2d 1555, 19 U.S.P.Q.2d (BNA) 1111 (Fed. Cir. 1991) (“drawings alone may be sufficient to provide the ‘written description of the invention’ required by §112, first paragraph”). Hence, withdrawal of the rejection of claims 1 and 39 on this ground is respectfully solicited.

As for claim 47, the Examiner contends it recites that “a portion of said plurality of structural fibers comprises one or more irregularly shaped fibers.” Applicant respectfully submits that this statement is not correct, since claim 47 includes no such requirement. Hence, withdrawal of the rejection of claim 47 on this ground is respectfully requested.

Substantively, the Examiner finally rejects claims 1, 3-4, 7, 14-15, 17-20, 24-25, 38-42 and 47-48, as being obvious over U.S. Patent Application Publication No. 2003/0060113 to Christie et al. (“Christie”), and U.S. Patent No. 5,972,166 to Helwig et al. (“Helwig”), “as evidenced by the definition of ‘mineral wool’ from Johnson’s New Universal Encyclopedia.” However, in making this specific ground of rejection, the Helwig reference is applied against only claims 4, 7, 38, and 41.

Pending claim 1 reads on a conformable surfacing veil "consisting essentially of" a plurality of structural fibers selected from the group consisting of polymer fibers, metal fibers, carbon fibers, and glass fibers. Each of the plurality of bicomponent fibers has a core substantially surrounded by an outer polymer annulus. According to this claim, the veil also comprises one or more irregularly shaped fibers having a melting point significantly higher than the outer polymer annulus. Consequently, the outer polymer annulus upon being heated at or to the melting point bonds with the structural fibers and irregularly shaped fibers to form a tough, but flexible and stretchable conformable veil with a softer feel than a comparable veil bonded with an equivalent amount of thermosetting acrylic binder.

Claim 39 more specifically requires that one or more irregularly shaped fibers has a melting point at least 100 degrees Fahrenheit higher than a melting point of the outer polymer annulus, and claim 47 still more specifically requires that the melting point of the outer polymer annulus is at least 100 degrees Fahrenheit lower than a melting point of the core and a melting point of the plurality of structural fibers.

Applicant has again conducted a careful and thorough review of the Christie reference, but still finds that its teaching is limited solely to the use of mineral wool (a point with which the Examiner seems to be in agreement). Applicant's claims under rejection all now require that the structural fibers are selected from the group consisting of polymer fibers, metal fibers, carbon fibers, and glass fibers. Not only are such fibers not disclosed in Christie, but this reference actually disparages similar panels made of glass fibers (see ¶¶7-8). Accordingly, the inventions of claims 1, 39, and 47 are believed to patentably distinguish over Christie.

In support of this ground of rejection, the Examiner “equates the mineral fibers to the structural fibers and the multi-component polymer fibers to Applicant’s ‘bicomponent fibers’” (Office Action dated 3-31-2009, p. 5, lines 3-4). Regardless of this statement, the Examiner has not in any way established that Christie discloses or renders obvious the claimed structural and irregular fibers required by claims 1 and 39. Furthermore, there is no legal support cited for the proposition that the ability to “equate” one structure for another in the prior art provides a proper and rational underpinning for a rejection based on obviousness, especially when the basis on which the structures “equate” had not been identified or explained. Even if such correspondence was established in this case, components which are functionally or mechanically equivalent are not necessarily obvious in view of one another. *See, e.g., In re Edge*, 359 F.2d 896, 898-899 (C.C.P.A. 1966) (“The examiner and the board appear to hold that the mere existence of ‘functional and mechanical equivalence’ establishes ‘obviousness.’ We think this involves a *non sequitur*. Expedients which are functionally equivalent to each other are not necessarily obvious in view of one another. The statutory mandate of 35 U.S.C. 103 is that the claimed subject matter be unobvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.”) (emphasis added). There is also no support whatsoever for the Examiner’s statement that the product of Christie would be a “tough but flexible and stretchable conformable veil,” since unlike Applicant’s claimed panel, it comprises mineral wool and is thus not susceptible to stretching or sagging. For these reasons and others, reconsideration is respectfully requested.

For similar reasons, the rejections of claims 4, 7, 38, and 41 based on the combination of Christie and Helwig cannot stand. The Examiner appears to rely on Helwig for its alleged teaching of irregular glass fibers. However, as noted above, Christie actually disparages the use of glass fibers, and again is exclusively limited to the use of mineral wool. Hence, a skilled artisan aware of these references would be disinclined to combine their teachings and arrive at the claimed inventions. Applicant respectfully notes that the Examiner in making the rejections appears to disregard this important point that would lead away from the combination proposed.

A further reason that a *prima facie* case of obviousness is lacking because of the lack of any evidence of a reason for using the irregular glass fibers of Helwig in the product of Christie. Evidentiary support for a reason for the combination is undoubtedly still a requirement of a *prima facie* case of obviousness. See Memorandum of Margaret A. Focarino, Deputy Commissioner for Patent Operations, May 3, 2007 (“in formulating a rejection under 35 U.S.C. 103(a) based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed . . .”) (emphasis added). Furthermore, the reason provided in support of a rejection must be articulated in the record and have a “rational underpinning.” See *KSR Int’l Co v. Teleflex, Inc.*, 127 S.Ct. 1727, 1742 (2007) (citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)).

Here, the Examiner's basis for adding the irregular glass fibers of Helwig "in place of" the wool fibers of Christie is "to create a panel having improved strength, processability, and compressibility" (Office Action of 3-31-09, p. 9, lines 3-4). There is no evidence that these stated "improvements" would result if the combination is made. Specifically, it has not been in any way shown or demonstrated that the panel of Christie would be of improved strength, processability, or compressibility by substituting irregular glass fibers for the mineral wool; that such qualities would be recognized as desirable based on the teachings of Christie; or that there is a reasonable expectation of success if irregular glass fibers replace the mineral wool fibers, as the Examiner proposes. Accordingly, this reasoning cannot qualify as the necessary "rational underpinning" for making the substitution, and instead represents the type of "mere conclusory statement" that cannot support a proper rejection based on obviousness.

This final Action also includes a further new rejection of claims 9-10, 21-23, 37 and 43 based on Christie and Helwig in view of the "Handbook of Composites" edited by S.T. Peters. According to the Examiner, this "Handbook of Composites discusses a number of glass compositions useful for creating fibers depending on the desired properties." Based on this teaching of the properties of glass generally, the legal conclusion is reached that it would be been obvious to use the claimed fibers "as the glass fibers of Christie et al." in view of Helwig "motivated by the desired to create a panel having the desired properties" (Office Action dated 3-31-2009, p. 10, lines 3-6).

Again, there are no "glass fibers" disclosed in Christie, since this reference expressly disparages the use of such in favor of mineral or rock

wool. Hence, in cannot as a matter of law be considered “obvious” to “use” irregular fibers as the “glass” fibers of Christie et al., as the Examiner proposes. Likewise, the Examiner’s proposal to combine the references does not qualify as the necessary articulated reasoning based on a rational underpinning. Instead, it constitutes a mere conclusory statement that cannot support a proper rejection based on obviousness. Reconsideration is therefore respectfully requested.

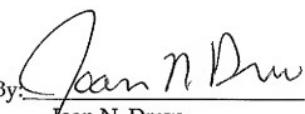
As for the continued rejections of claims 44-46 and 50, the Examiner contends these claims are directed to “obvious” inventions in view of the teachings of Christie in view of U.S. Patent No. 5,571,592 to McGregor et al. (“McGregor”). In making the rejection, the Examiner admits that Christie does not disclose or even remotely mention the claimed microspheres. Accordingly, citation is made to McGregor for a teaching of microspheres.

Here, a reason and the corresponding underpinning necessary to support a proper rejection based on obviousness is again lacking. Instead, the Examiner simply appears to be combining isolated teachings from disparate references, which has long been assailed in formulating obviousness rejections, as specifically recognized by the Court in the KSR decision. *See KSR Int'l Co v. Teleflex, Inc., supra* (“a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art . . . ”). Respectfully, no explanation is provided as to why a skilled artisan would use microspheres to “create a material with improved thermal insulation properties” when Christie is not at all concerned with thermal insulation. Rather, a mere conclusion is provided in support of the rejection. Accordingly, a *prima facie* case of obviousness is lacking.

Upon careful review and reconsideration, it is believed the Examiner will agree that all claims are in condition for allowance. Accordingly, the early issuance of a formal Notice of Allowance is earnestly solicited to avoid the need for bringing this matter before the Board. Authorization is given to charge any fees required to Deposit Account No. 50-0568 in connection with this Amendment document.

Respectfully submitted,

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